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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/653,823

09/03/2003

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EXAMINER

AMIRI, NAHID

ART UNIT

PAPER NUMBER

3679

MAIL DATE

DELIVERY MODE

04/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/653,823	<b>Applicant(s)</b> TAKEUCHI, TOSHIHIRO	
	<b>Examiner</b> NAHID AMIRI	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-9, 11, 12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) 7-9, 15, and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 11, 12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

In view of Applicant's Amendment received 22 January 2008, amendments to the claims have been entered. Claims 5, 6, 10, and 13 are canceled. Claims 1-4, 7-9, 11, 12, and 14-19 are pending.

Claims 7-9, 15, and 16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8 June 2007.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

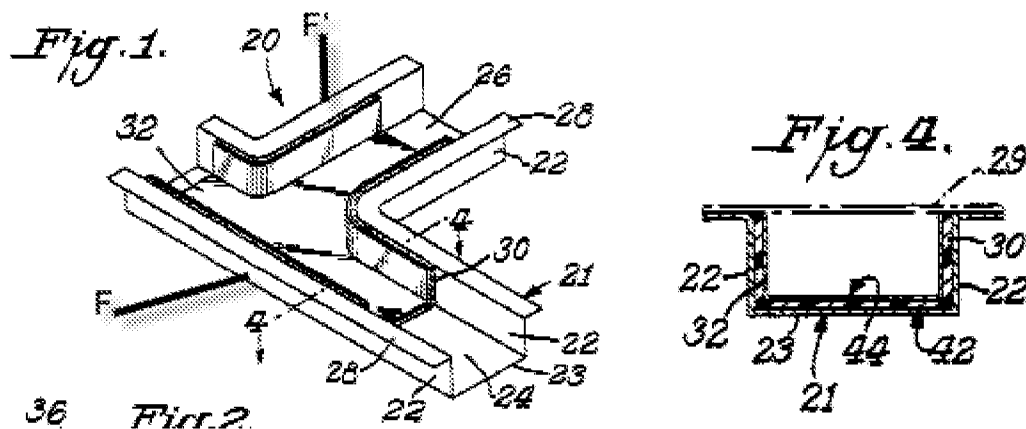
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

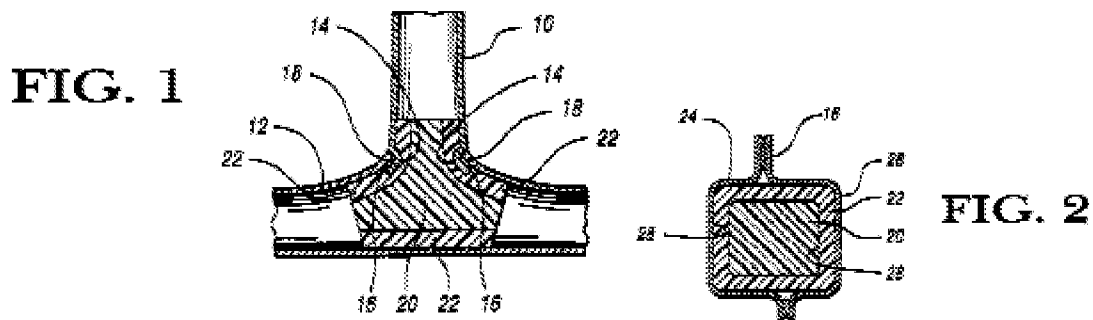
**Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,270,600 B1 Wycech in view of Davies.**

With respect to claim 1, at the outset, it should be noted that patentability in a product-by-process claim is based on the resultant structure of the product and not the recited process steps. Wycech discloses a joint frame joint structure (Figs. 1, 4) comprising a first frame member (F) of U-shaped cross section having a first sidewall (22), a second sidewall (22), a bottom wall (23) and an opening (24); a second frame member (F') similar to the first frame member (F) of U-shaped cross section having an opening (26), said second frame member (F') having an end portion connected to at least one of the first sidewall (22) and the second sidewall (22) of the first frame member (F) so as to define a joint constituted by an integral joint between first and second frame members (F, F'); a reinforcing member (32) extending into the first frame member (F) and

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the second frame member (F') by predetermined lengths at a joint of the first frame member (F) and the second frame member (F'); a plate member (29) closing the openings (24, 26) of the first and second frame members (F, F') to form closed cross sections; and a foamed resin surrounding the reinforcement member and filling a space defined by the first and second frame members (F, F') and the reinforcing member (32). Wycech does not disclose that there is a space between the plate member and first and second frame member and the reinforcing member which filled by a foam resin. Davies teaches a joint (Figs. 1-2) having a foamed resin (22) surrounding a reinforcement member (20) and filling a space defined by a plate member (24), first and second frame members (12, 14) and the reinforcing member (20), such that the reinforcement member is spaced from the first and second frame members (12, 14), and wherein the foamed resin serves to space the reinforcing member (20) from the first and second frame members (12, 14) and cooperates with the reinforcing member to strengthen the joint. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide the joint of Wycech with a space between the foamed rein and a plate member as taught by Davies in order stiffen the joint.





With respect to claim 2, Wycech discloses (Fig. 1) that the reinforcing member (32) is generally T-shaped.

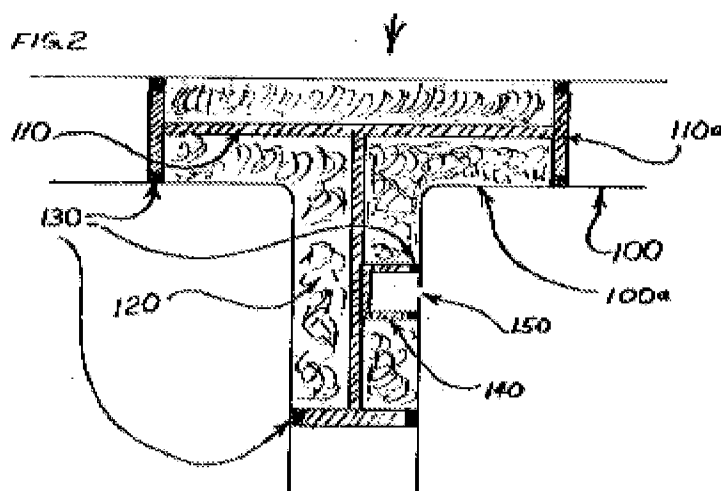
**Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wycech and Davies as applied to claims 1 and 2 above, and further in view of US Patent No. 2,239,173 Madsen.**

With respect claim 3, Wycech discloses that the unfoamed resin (30) is applied only to the reinforcing member (32) such that the subsequently formed resin (30) secures the reinforcing member to the first and second frame members (F, F') and thereby reinforces the first and second frame members only in vicinity of the joint. Wycech does not disclose that reinforcing member is L-shaped. Madsen teaches a frame joint (33, Fig. 3) having a L-shaped reinforcing member (62). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the frame joint of Wycech with a L-shaped reinforcing member as taught by Madsen in order to connect the mitered ends of the frame members together.

With respect to claim 4, Wycech suggest (Fig. 4) that the plate member (29), the first and second frame members (F, F'), and reinforcing member (10) may be made of metal in view of the illustration of metal cross-hatching. Wycech does not disclose that the plate member and the first and second frame members are made from a first metal material, which is different from a second metal material of the reinforcing member, and are affixed to one another by welding. Heilemann teaches a device (column 5, lines 13-16) having a combination of an aluminum plate with a copper pipe, i.e., two different metal materials. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide Kunz with the first, second frame members and the plate member from first metal member which affixed them to one another by welding and the reinforcing member from a second metal member which is different from first metal member as taught by Heilemann so as to provide chemically compatible materials to minimize corrosion.

**Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wycech and Davies as applied to claims 1 and 2 above, and further in view of US Patent No. 6,896,320 Kropfeld.**

With respect to claim 11, Wycech discloses (Fig. 2) that the second frame member (F') having an end portion connected to one of the first and second sidewalls (22) of the first frame member (F), wherein the one of the first and second sidewalls (22) of the first frame member (F) has a hole formed therein; and wherein the hole is larger than a cross-sectional dimension of the reinforcing member (32) such that the reinforcing member (32) may freely extend through the hole in the first frame member (F); and a foam resin (30) placed between the reinforcing member (32) and one of the sidewalls (30). Wycech does not disclose that an annular space surrounding the reinforcing member and the one of the first and second sidewalls of the first frame member at the hole being filled with the foamed resin. Kropfeld teaches a joint (Fig. 2) having an annular space surrounding a reinforcing member (110) and the one of the first and second sidewalls of the first frame member (100) at a hole of one of the sidewall being filled with the foamed resin (120). It would have been obvious to one of ordinary skill in the art at the time of invention was made to filled the annular space surrounding a reinforcing member and the one of the first and second sidewalls of the first frame member of Wycech with a foamed resin as taught by Kropfeld in order to reinforce the body and clogged the hole of the frame member.



**Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wycech and Davies in view of US Patent No. 6,896,320 Kropfeld.**

With respect to claim 12, at the outset, it should be noted that patentability in a product-by-process claim is based on the resultant structure of the product and not the recited process steps. Wycech discloses a joint frame joint structure (Figs. 1, 4) comprising a first frame member (F) of U-shaped cross section having a first sidewall (22), a second sidewall (22), a bottom wall (23) and an opening (24); a second frame member (F') similar to the first frame member (F) of U-shaped cross section having an opening (26), said second frame member (F') having an end portion connected to at least one of the first sidewall (22) and the second sidewall (22) of the first frame member (F) so as to define a joint constituted by an integral joint between first and second frame members (F, F'); a reinforcing member (32) extending into the first frame member (F) and the second frame member (F') by predetermined lengths at a joint of the first frame member (F) and the second frame member (F'); a planar plate member (29) closing the openings (24, 26) of the first and second frame members (F, F') to form closed cross sections; and a foamed resin filling spaces defined by the plate member (29), the first and second frame members (F, F') and the reinforcing member (32), wherein the foamed resin (30) is placed in lower surface of the reinforcing member (32), and wherein the foamed (30) serves to space the reinforcing member from the first and second frame members (F, F') and cooperates with the reinforcing member (32) to strengthen the joint; and wherein the second frame member (F') having an end portion connected to one of the first and second sidewalls (22) of the first frame member (F), wherein the one of the first and second sidewalls (22) of the first frame member (F) has a hole formed therein; and wherein the hole is larger than a cross-sectional dimension of the reinforcing member (32) such that the reinforcing member (32) may freely extend through the hole in the first frame member (F); and a foam resin (30) placed between the reinforcing member (32) and one of the sidewalls (30). Wycech does not disclose that an annular space surrounding the reinforcing member and the one of the first and second sidewalls of the first frame member at the hole being filled with the foamed resin. Kropfeld teaches a joint (Fig. 2) having an annular space surrounding a reinforcing member (110) and the one of the first and second sidewalls of the first frame member (100) at a hole of one of the sidewall being filled with the foamed resin (120). It would have been obvious to one of ordinary skill in the art at the time of invention was made to fill the annular space surrounding a reinforcing member and the one of the first and second sidewalls of the first frame member of Wycech with a foamed resin as taught by Kropfeld.



in order to reinforce the body and clogged the hole of the frame member. Wycech does not disclose that there is a space between the plate member and first and second frame member and the reinforcing member which filled by a foam resin. Davies teaches a joint (Figs. 1-2) having a foamed resin (22) surrounding a reinforcement member (20) and filling a space defined by a plate member (24), first and second frame members (12, 14) and the reinforcing member (20), such that the reinforcement member is spaced from the first and second frame members (12, 14), and wherein the foamed resin serves to space the reinforcing member (20) from the first and second frame members (12, 14) and cooperates with the reinforcing member to strengthen the joint. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide the joint of Wycech with a space between the foamed rein and a plate member as taught by Davies in order stiffen the joint.

**Claims 14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wycech, Davies and Kropfeld as applied to claim 12 above, and further in view of US Patent No. 3,948,247 Heilemann.**

With respect to claims 14 and 17-19, Wycech discloses that the plate member (29) is generally planar; and (Fig. 4) suggests that the plate member (29), the first and second frame members (F, F'), and reinforcing member (10) may be made of metal in view of the illustration of metal cross-hatching. Wycech does not disclose that the reinforcing member is formed from a second metal material, and wherein first metal material is different than the second metal material and are affixed to one another by welding and the first frame member are made of steel and the second frame member is made of an aluminum alloy. Heilemann teaches a device (column 5, lines 13-16) having a combination of an aluminum plate with a copper pipe, i.e., two different metal materials. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide Kunz with the first, second frame members and the plate member from first metal member which affixed them to one another by welding and the reinforcing member from a second metal member which is different from first metal member as taught by Heilemann so as to provide chemically compatible materials to minimize corrosion.

*Response to Arguments*

Applicant's arguments with respect to claims 1-4, 11, 12, and 14 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art of record US Patent No. 5,102,188 Yamane; US Patent No. 5,866,052 Muramatsu; US Patent No. 6,003,274 Wycech; US Patent No. 6,287,666 B1 Wycech; and US Patent No. 7,097,794 B2 Mcleod et al.; are cited to show a foam resin surrounding a reinforcing member and filling a space between a frame members, a plate and the reinforcing member.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action, e.g. claim 1, lines 15-18, the limitation of “**a foamed resin surrounding the reinforcement member and filling a space defined by the plate member, the first and second frame members and the reinforcing member, such that the reinforcement member is spaced from the first and second frame members and the plate member by the foamed resin**”; was not claimed in original claimed invention. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nahid Amiri  
Examiner  
Art Unit 3679  
April 2, 2008

/Daniel P. Stodola/  
Supervisory Patent Examiner, Art Unit 3679